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Margaret Efron, Patent Attorney

REQUEST FOR CERTIFICATE OF CORRECTION UNDER 37 CFR 1.322  
Docket No. PIT-100C1  
Patent No. 6,783,411

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Allan Walter Pither  
Issued : August 31, 2004  
Patent No. : 6,783,411 ✓  
For : Propeller Protector Slipper

Mail Stop Certificate of Corrections Branch  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

REQUEST FOR CERTIFICATE OF CORRECTION  
UNDER 37 CFR 1.322 (OFFICE MISTAKE)

Sir:

A Certificate of Correction (in duplicate) for the above-identified patent has been prepared and is attached hereto.

In the left-hand column below is the column and line number where errors occurred in the patent. In the right-hand column is the page and line number in the application where the correct information appears.

Patent Reads:

Abstract, line 5:  
"damage to propeller"

Column 1, line 2:  
"CROOS"

Column 1, line 48:  
"stem"

Application Reads:

Page 15, line 4:  
--damage to the propeller--

Page 1, line 3:  
--Cross--

Page 2, line 4:  
--stern--.

Column 3, line 23:  
“the boat As”

Page 4, line 20:  
--the boat. As--

Column 3, line 29:  
“stem”

Page 4, line 23:  
--stern--

Column 3, line 47:  
“housing until The”

Page 5, line 5:  
--housing unit. The--

Column 4, line 54:  
“blade area”

Page 6, line 35:  
--blade area.--

A true and correct copy of pages 1, 2, 4, 5, 6, and 15 of the specification as filed which supports Applicants' assertion of the errors on the part of the Patent Office accompanies this Certificate of Correction.

Approval of the Certificate of Correction is respectfully requested.

Respectfully submitted,



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MHE/hey

Attachments: Certificate of Correction in duplicate; pages 1, 2, 4, 5, 6, and 15 of the specification

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 6,783,411

Page 1 of 1

DATED : August 31, 2004

INVENTOR : Allan Walter Pither

It is certified that errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Abstract.

Line 5, "damage to propeller" should read --damage to the propeller--.

Column 1.

Line 2, "CROOS" should read --Cross--.

Column 1.

Line 48, "stem" should read --stern--.

Column 3.

Line 23, "the boat As" should read --the boat. As--.

Line 29, "stem" should read --stern--.

Line 47, "housing until The" should read --housing unit. The--.

Column 4.

Line 54, "blade area" should read --blade area--.

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PATENT NO. 6,783,411

No. of additional copies





## DESCRIPTION

### PROPELLER PROTECTOR SLIPPER

#### Cross-Reference to Related Applications

**[0001]** This application claims the benefit of U.S. Application No. 10/131,393, filed April 23, 2002.

#### Background of the Invention

**[0002]** The present invention concerns propeller protectors that are attached over propellers of outboard or inboard motors to protect individuals from accidental injury when in proximity to the propeller. In particular, the present invention relates to a propeller protector slipper that easily slides over and attaches to a propeller thus increasing the safety of the user and other individuals from the propeller blades, whether the propeller is up or down, trailing, in water, or in storage. Advantageously, the protective slipper of the subject invention protects the propeller from damage.

**[0003]** Typically, the edges of propeller blades are very sharp and hazardous to any individuals within their vicinity, including boating passengers. People boarding or disembarking from boats may injure themselves on the sharp edges of the propeller blades. Such injuries often require stitches and are subject to infection based on the condition of the propeller and ambient water quality. Unfortunately, fatal injuries such as drowning may also result from individual contact with unprotected propeller blades.

**[0004]** Often, boat or pleasure-craft operators maneuver and anchor their craft in relatively shallow water, sometimes in areas where the boat comes in contact with the bottom of a lake or river, so that passengers can casually wade in the water and touch the bottom of the lake or sea while swimming. In order to maneuver in shallow water, the outboard motor or outdrive portion of stern drive systems may be concealed from view when in a functional position or when angled upward to prevent the propeller from contacting the bottom surface. In such cases, the likelihood of injury resulting from contact with exposed propeller blades when swimming or wading in their vicinity is greatly increased. Further, where swimmers are in water areas subject

to tidal or general current, there is the possibility that the current will effect the swimmer's ability to evade contact with the propeller. Therefore, entering into and exiting from the water, as well as conducting recreational activities in the water, are often hazardous activities when the outboard portion of the stern drive is raised or lowered.

**[0005]** Exposed propellers also present a risk of injury to those individuals outside of the water. When the boat is docked, on a trailer, or out of the water in storage, individuals are subject to injury should they fall onto and cut themselves on the propeller blades. In particular, children are especially prone to injuries when playing near the sharp blades of an exposed propeller protruding from a boat.

**[0006]** When trailering a boat or pleasure-craft, the outboard motor is locked in the angled position so that the propeller and skeg project from the craft. This can be hazardous to following vehicles as drivers may not appreciate how far the propeller and skeg project from the boat. In addition, the position of the propeller is also hazardous to pedestrians who may bump into the propeller when walking or performing activities in the vicinity of the propeller.

**[0007]** Finally, exposed propellers and lower units are susceptible to damage when in shallow waters or in transit. When a boat is docked or out of water in transit, the propeller is subjected to many elements (e.g. rocks or leaves) that damage the propeller blades. Additional debris may also settle in the exhaust hub inhibiting exhaust gases and water coolant discharge. Generally, the cost to repair or replace a propeller, an engine, or an outboard or outdrive is substantial.

**[0008]** Safety devices and protective devices have been used in association with boat propellers. For example, the protective cover disclosed in U.S. Patent No. 5,494,465 is fashioned such that (1) the user must stand in front of the propeller to attach the cover and (2) the cover must enclose both the skeg and the propeller. U.S. Patent No. 5,664,975 is directed to a reflective safety bag having a flat bottom wall. This safety bag includes a drawstring to secure the bag over the propeller. The disadvantage of this bag is that it is pliable, requiring a user to adjust the mouth of the opening of the bag and bring their hands within close proximity if not having to actually touch the blades in order to place the bag over the propeller. Further difficulties arise where the propeller is located beneath an ant cavitation plate with a trim tab or

which the lower unit gear housing hub may be inserted to enclose the propeller within the housing unit. To secure the housing unit over a propeller, the housing unit includes a securing means. The securing means prevents the housing unit from detaching from the propeller either under water or while in storage or transit. In a related specific embodiment, the housing unit is secured over a propeller using a dowel rod and clevis pin.

**[0012]** To slip the housing unit over the propeller, minimal longitudinal force is applied in either the starboard or the port direction. According to the present invention, the housing unit is easily slipped over a propeller of an outboard/outdrive motor that is located between three different structures: aft of the lower unit gear housing, below the anticavitation plate, and forward of the trim tab. This is particularly useful in that the user is not facing the propeller and is not liable to harm himself when attempting to secure the subject invention over a propeller. By slipping the housing unit over the propeller in a longitudinal direction, the propeller protector according to the present invention ensures that the user's hands do not get injured in the process of securing the housing unit over the propeller.

**[0013]** Minimal longitudinal force is applied to the housing unit when slipping the housing unit over a propeller of an inboard motor. Generally with inboard motors (depending on the type of vessel), the propeller shaft is a through hull propeller shaft that emerges from the bottom of the boat. As with an outboard motor, the housing unit may be slipped over a propeller of an inboard motor from either the starboard or the port direction. The housing unit is slipped easily over a propeller of an inboard motor in a longitudinal direction, below the bottom structure of the boat and forward of the rudder to the stern of the propeller shaft strut.

**[0014]** The housing unit may be constructed from a variety of materials and in a variety of shapes to ensure coverage over the propeller, so long as the shape accommodates the ability to longitudinally slip the housing unit over the propeller. For example, the housing unit may be composed of buoyant, high strength material such as carbon fiber, polypropylene, polyethylene, or polyvinyl chloride. Where the shape of the housing unit more closely resembles the shape of the propeller, the greater the protection against detachment of the housing unit from the propeller due to vibration, wind, and water current.

[0015] Specifically exemplified herein is a housing unit in the shape of a rectangle. The housing unit has a cut away portion in the back surface of the housing unit to accommodate the lower unit gear housing exhaust hub. In addition, a side surface of the housing unit is cut away to provide an opening through which a propeller may be inserted and enclosed within the housing unit. The housing unit can be secured over the propeller by, for example, inserting a dowel rod through aligned bores located at the top and bottom surfaces of the housing unit near the cut away side surface, and securing the dowel rod with a clevis pin.

[0016] In another embodiment of the present invention, the interior of the housing unit includes a cushioning means to protect the propeller from any force of impact generated by an object that strikes the housing unit.

[0017] Yet another embodiment of the present invention provides a housing unit with reinforcement material surrounding the cut-away portion that accommodates the propeller shaft. Additional structural reinforcement known to the skilled artisan may be provided along the exterior surface of the housing unit. For example, the sides, front and back surfaces of the housing unit may be bent or include stiffening ribs to provide structural reinforcement.

[0018] A further embodiment of the present invention includes a means for making the housing unit readily visible to individuals. Specifically, reflective tape or a warning sign may be secured to the exterior of a housing unit to ensure visibility of the propeller protector slipper for those vehicles following a boat in transit. Further, a means for attaching the housing unit to the boat may be affixed to the housing unit to provide ease of recovery should the housing unit become separated from the lower unit housing hub. A means for attaching the housing unit to the boat includes a lanyard.

[0019] In another embodiment of the present invention, a bushing or "reinforcing T" runs along the surface of the cut away portion to distribute the weight of housing unit over the lower unit gear housing hub. The bushing/"reinforcing T" also ensures additional rigidity/integrity to the structure of the housing unit.

Brief Description of Drawings

[0020] **Figure 1** is a side view of a protector propeller slipper, constructed in accordance with the principles of the present invention, secured to a propeller of a motor boat.

[0021] **Figure 2** is a perspective view of an embodiment of the propeller protector slipper.

[0022] **Figure 3** is a back view of the present invention depicting the cut away region that accommodates the propeller shaft.

[0023] **Figure 4** is another side view of a propeller protector slipper, constructed in accordance with the principles of the present invention, depicting the cut away side surface and a means for securing the slipper to a propeller of a motor boat.

[0024] **Figure 5** is a perspective view of the subject invention with a substantially cylindrical housing unit.

[0025] **Figures 6A and 6B** are perspective views of the propeller protector slipper including a bushing/reinforcing T along the surface of the cut away region.

[0026] **Figure 7** is a view of a means for attaching the housing unit to a vessel.

Detailed Disclosure of the Invention

[0027] The present invention provides a propeller protector slipper to be applied to propellers of inboard and/or outboard motors. In a preferred embodiment, the propeller protector slipper according to the subject invention includes a housing unit to envelop a propeller and a means for securing the housing unit to maintain attachment over the propeller. Advantageously, the housing unit of the subject invention is safely and easily secured over a propeller by applying minimal longitudinal force to either the port or starboard side surface opposite the cut away side.

[0028] The terms "aft," "forward," "starboard," and "port," as used herein, are common nautical terms that identify various locations in relation to a nautical vessel.

[0029] The term "anticavitation plate" as used herein refers to a plate located above the propeller blades to prevent surface air from entering the blade area.

Abstract

[0049] Propeller protector slipper to be used on inboard and outboard motors of boats that are anchored, drifting, aground, docked, in storage, or out of water in transit. The propeller protector slipper ensures protection for the propeller from elements that cause pitting and damage to the propeller as well as minimizing propeller related injuries. The protector propeller slipper also provides a gage for projecting the distance of the propeller of a trailored boat from a following vehicle.